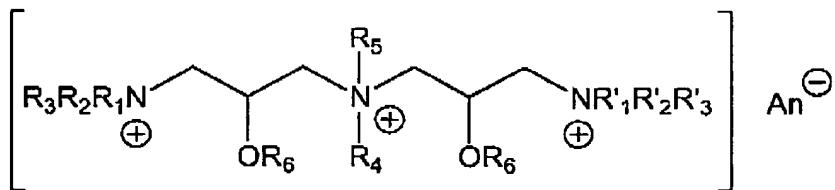


Docket No. SACHPO148US  
 (FORMERLY SOU747/4-13CON US)

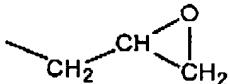
Serial No. 10/795,772

CLAIMS

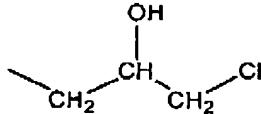
1. (Currently amended) A compound of the formula



wherein each  $\text{R}_1$ ,  $\text{R}'_1$ ,  $\text{R}_2$ ,  $\text{R}'_2$ ,  $\text{R}_3$ ,  $\text{R}'_3$ ,  $\text{R}_4$  or  $\text{R}_5$  is independently selected from the group consisting of alkyl, aryl, aralkyl and  $-\text{CH}_2-\text{CH}(\text{OR}_6)-\text{CH}_2\text{N}^+\text{R}_1\text{R}_2\text{R}_3\text{An}^-$ , wherein any  $\text{R}_1$ ,  $\text{R}_2$  or  $\text{R}_3$  group may be the same or different than other  $\text{R}_1$ ,  $\text{R}'_1$ ,  $\text{R}_2$ ,  $\text{R}'_2$ ,  $\text{R}_3$  or  $\text{R}'_3$  groups, and wherein each  $\text{R}_6$  can be independently selected from the group consisting of H, alkyl and aralkyl, a 2,3-epoxypropyl group having the structure: one or more  $\text{R}_6$  group is selected from the group consisting of:



and a 3-chloro-2-hydroxypropyl group having the structure:



and wherein  $\text{An}^-$  is an anion, provided that at least one of the  $\text{R}_6$  groups is the 2,3-epoxypropyl group or the 3-chloro-2-hydroxypropyl group.

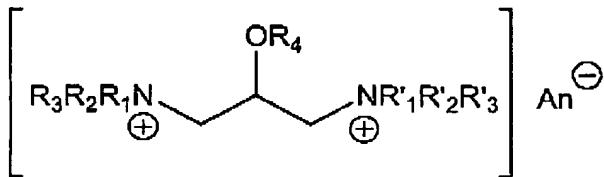
2. (Original) The compound of claim 1, wherein one  $\text{R}_1$  group and the  $\text{R}_4$  group comprise a single alkyl group having one or more carbons, and wherein the alkyl group

Docket No. SACHPO148US  
 (FORMERLY SOU747/4-13CON US)

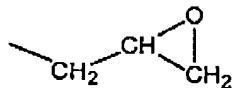
Serial No. 10/795,772

forms part of a cyclic structure that further comprises two positively charged nitrogen centers separated by a three-carbon fragment bearing an -OR<sub>4</sub> group.

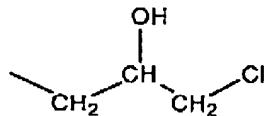
3. (Currently amended) A compound of the formula



wherein each R<sub>1</sub>, R'<sub>1</sub>, R<sub>2</sub>, R'<sub>2</sub>, R<sub>3</sub> or R'<sub>3</sub> group is independently selected from the group consisting of alkyl, aryl, aralkyl and -CH<sub>2</sub>-CH(OR<sub>4</sub>)-CH<sub>2</sub>N<sup>+</sup>R<sub>1</sub>R<sub>2</sub>R<sub>3</sub> An<sup>-</sup>, wherein any R<sub>1</sub>, R<sub>2</sub> or R<sub>3</sub> group may be the same or different than other R<sub>1</sub>, R'<sub>1</sub>, R<sub>2</sub>, R'<sub>2</sub>, R<sub>3</sub> or R'<sub>3</sub> groups, and wherein each R<sub>4</sub> can be independently selected from the group consisting of H, alkyl and aralkyl, a 2,3-epoxypropyl group having the structure: one or more R<sub>4</sub> group is selected from the group consisting of:



and a 3-chloro-2-hydroxypropyl group having the structure:



and wherein An<sup>-</sup> is an anion, provided that at least one of the R<sub>4</sub> groups is the 2,3-epoxypropyl group or the 3-chloro-2-hydroxypropyl group.

Docket No. SACHPO148US  
(FORMERLY SOU747/4-13CON US)

Serial No. 10/795,772

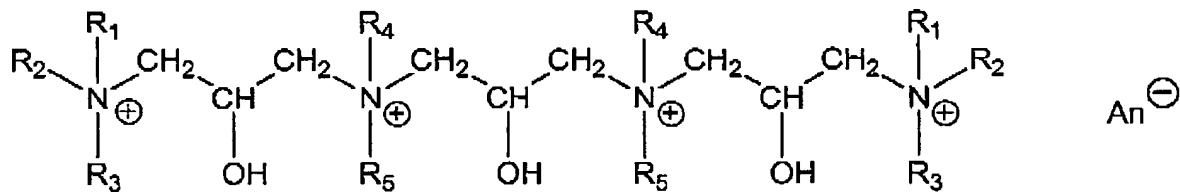
4. (Original) The compound of claim 3, wherein the R<sub>1</sub> and R'<sub>1</sub> groups comprise a single alkyl group having one or more carbons, and wherein said alkyl group forms part of a cyclic structure that further comprises two positively charged nitrogen centers separated by a three-carbon fragment bearing an -OR<sub>4</sub> group.
5. (Original) The compound of claim 3 wherein the one or more R<sub>4</sub> groups is a 2,3-epoxypropyl group.
6. (Original) A modified carbohydrate formed by the reaction of:  
the compound of claims 1,2,3,4 or 5; and  
a carbohydrate having one or more hydroxyl groups.
7. (Original) The modified carbohydrate of claim 6 wherein the carbohydrate is a starch.
8. (Cancelled)
9. (Currently amended) ~~The method of using the compound of claims 1, 2, 3, 4 or 5 to make A method of making~~ a modified carbohydrate comprising reacting the compound of any one of claims 1, 2, 3, 4 or 5 with a carbohydrate.
10. (Currently amended) ~~The method of using A method of waste water treatment comprising adding~~ the modified carbohydrate of claim 6 as to a waste water treatment agent.
11. (Currently amended) The method of ~~using the modified carbohydrate of claim 6 in a papermaking process~~ claim 9 wherein the carbohydrate is a starch.

**Docket No. SACHPO148US**  
**(FORMERLY SOU747/4-13CON US)**

**Serial No. 10/795,772**

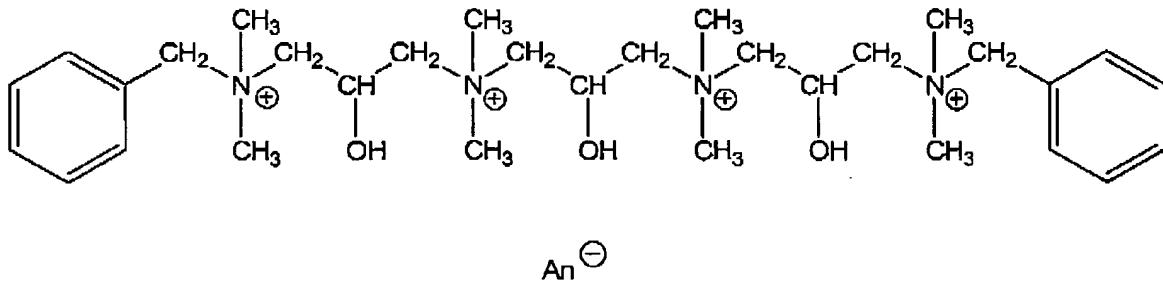
12. (New) The compound of claim 1 wherein at least one of the one or more R<sub>6</sub> groups is a 2,3-epoxypropyl group.

13. (New) A compound having the structure:



wherein each R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> group may be independently selected from the group consisting of alkyl, aryl, aralkyl and An<sup>-</sup> may be one or more organic or inorganic, monovalent or polyvalent anion as needed to obtain a neutral compound.

14. (New) The compound of claim 13, having the structure:

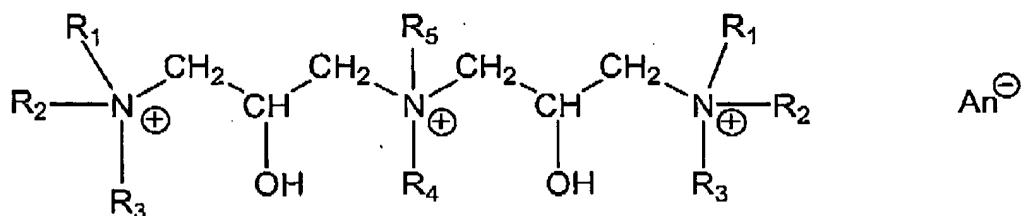


$An^-$

**Docket No. SACHPO148US**  
**(FORMERLY SOU747/4-13CON US)**

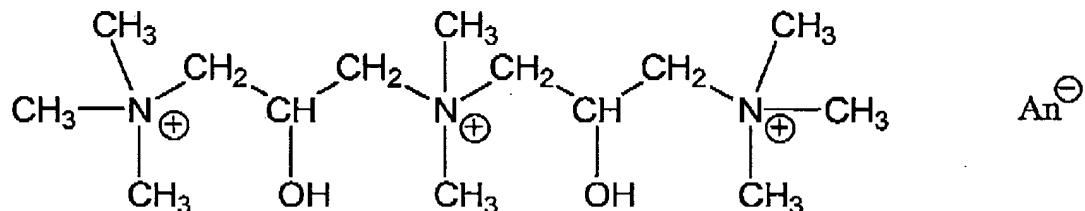
**Serial No. 10/795,772**

15. (New) A compound having the structure:



wherein each R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> group may be independently selected from the group consisting of alkyl, aryl, aralkyl and An<sup>-</sup> may be one or more organic or inorganic, monovalent or polyvalent anion as needed to obtain a neutral compound.

16. (New) The compound of claim 15, having the structure:



17. (New) The compound of claim 15, having the structure:

